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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/098,585	03/15/2002	Markus Duelli	18-3 US	3242

27975 7590 01/16/2004

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EXAMINER	
WOOD, KEVIN S	
ART UNIT	**PAPER NUMBER**
2874	

DATE MAILED: 01/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/098,585	DUELLI ET AL.	
	Examiner	Art Unit	
	Kevin S Wood	2874	MW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 March 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *1203*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

Brian Healy
Primary Examiner

DETAILED ACTION

Response to Amendment

1. This action is responsive to the applicant's amendment filed on 9 December 2003. Claims 2-4 have been amended. Claims 7-19 have been withdrawn. No new claims have been added. Claims 1-6 are now pending in the application.

2. Based on the applicant's amendment, the objections to the drawings cited in the previous action are withdrawn. Also based on the applicant's amendment the rejection of claim 2 under 35 U.S.C. 112, second paragraph, is withdrawn.

3. The declaration filed on 9 December 2003 under 37 CFR 1.131 has been considered but is ineffective to overcome the Reed et al. reference.

4. The evidence submitted is insufficient to establish a reduction to practice of the invention in this country or a NAFTA or WTO member country prior to the effective date of the Reed et al. reference. The examiner has thoroughly reviewed the declaration and evidence presented in the declaration. There has been no allegation that the acts relied upon were done in the U.S. or a NAFTA or WTO member country. There also has been no allegation of a reduction to practice prior to the effective date of Reed et al. Based on these facts the examiner has found the declaration insufficient in overcoming the Reed et al. reference.

A conception of an invention, though evidenced by disclosure, drawings, and even a model, is not a complete invention under the patent laws, and confers no rights on an inventor, and has no effect on a subsequently granted patent to another, UNLESS THE

INVENTOR FOLLOWS IT WITH REASONABLE DILIGENCE BY SOME OTHER ACT, such as an actual reduction to practice. Automatic Weighing Mach. Co. v. Pneumatic Scale Corp., 166 F.2d 288, 1909 C.D. 498, 139 O.G. 991 (1st Cir. 1909).

In general, proof of actual reduction to practice requires a showing that the apparatus actually existed and worked for its intended purpose.

Response to Arguments

5. Applicant's arguments filed on 9 December 2003 have been fully considered but they are not persuasive. The examiner has thoroughly reviewed the applicant's arguments but firmly believes the cited references reasonably and properly meet the claimed limitations. The applicant's primary argument is that the Reed et al. reference should not be considered prior art. The applicant submitted a declaration under 37 C.F. R. 1.131 to this effect that was found to be insufficient by the examiner. Therefore, the examiner believes that Reed et al. can be used as prior art to reject claims 1-6.

6. Applicant did not submit arguments pointing out disagreements with the examiner's contentions that claims 1-6 are obvious in view of Reed et al. All of the applicant's arguments were directed towards the Reed et al. reference not being filed prior to the applicant's conception date. Therefore the examiner firmly believes the cited references reasonably and properly meet the limitations of claims 1-6.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,542,665 to Reed et al.

Referring to claim 1, Reed et al. discloses a fiber-optic optical coupling assembly including: a first optical waveguide (13) having a first terminal end; a second of graded index fiber (11'), wherein the first terminal en of the graded index fiber is in optical communication with the first terminal end of the first optical waveguide whereby an optical beam propagating from the first terminal end of the first optical waveguide and exiting the second terminal end of the graded index fiber is reduced to a diameter (waist) at a distance from the terminal end of the graded index fiber. Reed et al. does not appear to specifically disclose the diameter of the beam is less than 30 microns at a

distance greater than 220 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the assembly to have a specific beam waist at a specific distance, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. See Fig. 4A and Fig. 4B, along with their respective portions of the specification.

Referring to claim 4, Reed et al. discloses a fiber-optic optical coupling assembly including: a first optical waveguide (13) having a first terminal end; a second of graded index fiber (11'), wherein the first terminal en of the graded index fiber is in optical communication with the first terminal end of the first optical waveguide whereby an optical beam propagating from the first terminal end of the first optical waveguide and exiting the second terminal end of the graded index fiber. Reed et al. does not appear to specifically disclose that the graded index fiber has an index of refraction gradient characterized by a change in refractive index of less than about 0.009 over a core diameter of about 80 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the graded index fiber to have a suitable index of refraction gradient over a certain core diameter, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. See Fig. 4A and Fig. 4B, along with their respective portions of the specification of the Reed et al. reference.

Referring to claim 5, Reed et al. discloses that the graded index fiber (16) has an angle cleaved at an angle of 2 degrees. See col. 2, lines 59-66.

Referring to claim 6, Reed et al. does not appear to disclose an anti-reflection coating at the second terminal end of the gradient index fiber. Anti-reflection coatings are known in the art and are commonly used to minimize optical loses. It would have been obvious to one having ordinary skill in the art to utilize an anti-reflection coating on the graded index fiber to minimize optical loses due to reflection.

10. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,542,665 to Reed et al. in view of U.S. Patent No. 6,594,419 to Ukrainczyk et al.

Referring to claims 2 and 3, Reed et al. discloses that a thin glue layer may be used between the waveguide (36) and the graded index fiber (43). However, Reed et al. does not specifically disclose that the glue is index matching. Ukrainczyk et al. discloses a similar coupling assembly where an index matching epoxy is placed between a waveguide (2) and a graded index fiber (4) for the purpose of attaching the two waveguides together. Since Reed et al. and Ukrainczyk et al. are both from the same field of endeavor, the purpose disclosed by Ukrainczyk et al. would have been recognized in the pertinent art of Reed et al. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize an index matched epoxy spaced between the waveguide and the graded index fiber for the purpose of

attaching the waveguide to the fiber and limiting optical loses. See Fig. 4 and its respective portion of the specification of the Ukrainczyk et al reference.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

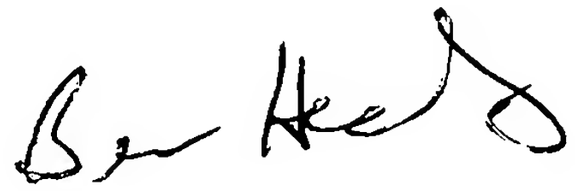
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin S Wood whose telephone number is (571) 272-2364. The examiner can normally be reached on Monday-Thursday (7am - 5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B Bovernick can be reached on (703) 308-4819. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)307-0956.

KSW



Brian Healy
Primary Examiner